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MELANOMA ANTIGENS AND THEIR USE IN DIAGNOSTIC AND THERAPEUTIC METHODS

This application is a divisional of application no. 09/898,860, filed July 3, 2001, now U.S. Patent No. 6,965,017, which is a divisional of application no. 09/267,439, filed March 12, 1999, now U.S. Pat. No. 6,270,778, which is a divisional of application no. 09/073,138, filed May 5, 1998, now U.S. Pat. No. 6,537,560, which is a continuation-in-part of application no. 08/417,174, filed April 5, 1995, now U.S. Pat. No. 5,844,075, which is a continuation-in-part of application no. 08/231,565, filed April 22, 1994, now U.S. Pat. No. 5,874,560, all of which are hereby incorporated by reference.

FIELD OF THE INVENTION

This invention is in the field of prevention and treatment of human cancers. More specifically, this invention relates to genes encoding melanoma antigens recognized by T-Cells and their corresponding proteins and to preventative, diagnostic and therapeutic applications which employ these genes or proteins.

BACKGROUND OF THE INVENTION

Melanomas are aggressive, frequently metastatic tumors derived from either melanocytes or melanocyte related nevus cells ("Cellular and Molecular Immunology" (1991) (eds) Abbas A.K., Lechtman, A.H., Pober, J.S.; W.B. Saunders Company, Philadelphia: pages 340-341). Melanomas make up approximately three percent of all skin cancers and the worldwide increase in melanoma is unsurpassed by any other neoplasm with the exception of lung cancer in women ("Cellular and Molecular Immunology" (1991) (eds) Abbas, A.K., Lechtiman, A.H., Pober, J.S.; W.B. Saunders Company Philadelphia pages: 340-342; Kirkwood and Agarwala (1993) Principles and Practice of Oncology 7:1-16). Even when melanoma is apparently localized to the skin, up to 30% of the patients will develop systemic metastasis and the majority will die (Kirkwood and Agarwala (1993) Principles and Practice of Oncology 7:1-16). Classic modalities of treating melanoma include surgery, radiation and chemotherapy. In the past decade immunotherapy and